

CLAIMS

1.-6. (Canceled)

7. (Currently amended) A call control system, comprising:

network means including first and second switch means, the first switch means configured to support a multi-link connection with an originating means and configured to request a connection by sending a set-up message means responsive to a request means from the originating means, where the set-up message means identifies the originating means and a terminating means;

server means coupled to the second switch means by a plurality of transmission means, where the server means is also coupled to the terminating means so as to support a the multi-link connection with the terminating means, the server means having multiple device means, each device means being coupled to the second switch means through a corresponding one of the transmission means; and

routing means coupled to the network means, the routing means configured to store a data entry means identifying the originating means as a potential source of a the multi-link connection, where the data entry means is stored in the routing means once the originating means has completed a first link with the terminating means through a selected one of the device means, where the routing means is configured to search for the data entry means identifying the originating means responsive to a subsequent request means from the originating means and if the data entry is found, direct routing of a subsequent communication link, responsive to the subsequent request means, from the originating means to the terminating means through the selected device means.

8. (Previously presented) The system of claim 7

where the data entry means identifies a number of links for the multi-link connection with the originating means; and

where the routing means reserves timeslots on the corresponding transmission means serving the selected device means coupled to the terminating means.

9. (Previously presented) The system of claim 8
where the routing means reserves the timeslots on the corresponding transmission means by transmitting a common channel signaling message means to the server means.

10. (Previously presented) The system of claim 9
where the server means reserves the timeslots on the corresponding transmission means responsive to the common channel signaling message by blocking termination of a connection other than the multi-link connection with the originating means when a number of available timeslots not used for the multi-link connection with the originating means is less than or equal to the timeslots.

11. (Previously presented) The system of claim 8
where the routing means selects a device means having the timeslots available on a corresponding transmission means as the selected device means to service the multi-link connection with the originating means.

12. (Previously presented) The system of claim 7
where the server means responsive to detecting multi-link protocol data on the first link, transmits a message means to the routing means identifying the originating means as a source of the first link; and

where the routing means stores the data entry means identifying the originating means as a potential source of the multi-link connection with the originating means responsive to the set-up message means.

13. (Previously presented) The system of claim 7
where the routing means stores the data entry means identifying the originating means as a potential source of the multi-link connection responsive to detecting more than one simultaneously active connections from the originating means to the terminating means.

14. (Previously presented) The system of claim 7

where the routing means directs routing of all connections from the originating means to the terminating means through the selected device means by transmitting a common channel signaling message means to the second switch means that identifies the transmission means corresponding to the selected device means.

15. (Previously presented) The system of claim 7

where the routing means directs routing of all connections from the originating means to the terminating means through the selected device means by transmitting a message means to the server means that identifies the originating means as a source of the multi-link connection with the originating means; and

where the server means blocks any subsequent communication link set-up request means for the originating means to the terminating means responsive to the message means that identifies the originating means a source of multi-link connections.

16. (Previously presented) The system of claim 7

where the data entry means identifies connections originating from any one of a set of originating phone numbers as a link in the multi-link connection with the originating client.

17. (Previously presented) The system of claim 7

where the routing means is integrated into the first switch means.

18. (Previously presented) The system of claim 7

where the routing means is integrated into the second switch means.

19. (Previously presented) The system of claim 7

where the routing means is a signal transfer means in the network means.

20. (Currently amended) A method for conducting a multi-link session, comprising:
receiving a set up message from a source client, the set up message requesting
establishment of a first communication link between the source client and a termination client;
completing the first communication link ~~detecting a request for a second communication~~
~~link from the source client;~~
accessing a database to retrieve connection characteristic information relating to the
complete first communication link, the connection characteristic information stored in the
database after completing ~~ending~~ the first communication link and before completing ~~ending~~ the
a second communication link from the source client; and
routing the second communication link responsive to the connection characteristic
information without interrupting the first communication link.

21. (Previously presented) The method of claim 20
where receiving the set up message includes receiving a set up message requesting
establishment of a first communication link between the source client and the termination client
through a terminating device; and
where routing the second communication link is through the terminating device
responsive to the connection characteristic information.

22. (Previously presented) The method of claim 21
where the first communication link is a multi-link point-to-point connection;
where the connection characteristic information is a multi-link point-to-point indicator;
and
where routing the second communication link includes:
identifying the terminating device where a first PPP session of the first
communication link resides; and
routing the second communication link to the terminating device responsive to the
request for the second communication link.

23. (Previously presented) The method of claim 21 comprising receiving a signaling
channel message requesting connection on a transmission facility serving the terminating device.

24. (Currently amended) The method of claim ~~21~~ 20 comprising blocking connection requests for the second communication link on any transmission facility that does not directly serve the terminating device.

25. (Previously Presented) The system of claim 7, where the selected device means comprises:

- a transmission termination means;
- a multiplexing means; and
- a plurality of processing means.

26. (Previously Presented) The system of claim 25, where the selected device means further comprises:

- a multilink line means coupled to two or more of the processing means; and
- a control means configured to:

- reserve a first one of the processing means coupled to the multilink means for the subsequent communication link when the first link is through a second one of the processing means coupled to the multilink means; and

- direct the subsequent communication link to the first one of the processing means responsive to the subsequent request means.

27. (New) The method of claim 21 further comprising:

- sending a message to an intermediary device for controlling routing of the second communication link through the terminating device, the message comprising the connection characteristic information.

28. (New) The method of claim 27 where the connection characteristic information comprises; a notification related to a multi-link potential of the first communication link or an identification of communication link requests subsequent to the completed first communication link from the source client as potential multi-link connections, or combinations thereof.